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GOHLMANN, HINRICH WILHELM HELMUT
SWAGEMAKERS, SIGRID MARIA ALICE
FIERENS, FREDERIK LUCIEN PETER

<120> GENES WHOSE EXPRESSION IS INCREASED IN RESPONSE TO
STIMULATION BY CORTICOTROPIN-RELEASING HORMONE

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 Asp Arg Pro Leu Met Leu Ala Ile His Lys Lys Ile Leu Gln Leu Ala
 405 410 415
 Gly Gln Pro Phe Asp His Ser Pro Ile Arg Phe Cys Ala Arg Asn Gly
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 Glu Tyr Val Thr Met Asp Thr Ser Trp Ala Gly Phe Val His Pro Trp
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 Ser Arg Lys Val Ala Phe Val Leu Gly Arg His Lys Val Arg Thr Ala
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 Pro Leu Asn Glu Asp Val Phe Thr Pro Pro Ala Pro Ser Pro Ala Pro
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 Ser Leu Asp Ser Asp Ile Gln Glu Leu Ser Glu Gln Ile His Arg Leu
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 Leu Leu Gln Pro Val His Ser Ser Ser Pro Thr Gly Leu Cys Gly Val
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 Gly Pro Leu Met Ser Pro Gly Pro Leu His Ser Pro Gly Ser Ser Ser
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 Asp Ser Asn Gly Gly Asp Ala Glu Gly Pro Gly Pro Pro Ala Pro Val
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 Thr Phe Gln Gln Ile Cys Lys Asp Val His Leu Val Lys His Gln Gly
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 Cys Asn Ile Pro Ser Thr Thr Lys Arg Lys Cys Ala Ser Ser Ser Ser
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 Val Pro Val Gly Ala Lys Lys Asp Pro Ser Ser Ala Met Leu Ser Gly
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 Pro Gly Cys His His Gly Pro Ile Pro Pro Gly Arg Arg His His Cys
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 Arg Ser Lys Ala Lys Arg Ser Arg His His His His Gln Thr Pro Arg
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 Pro Glu Thr Pro Cys Tyr Val Ser His Pro Ser Pro Val Pro Ser Ser
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 Gly Pro Trp Pro Pro Pro Pro Ala Thr Thr Pro Phe Pro Ala Met Val
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 Gln Pro Arg Phe Ser Glu Asp Gln Arg Arg Glu Leu Gly Ala Val His
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Ser Trp Val Arg Lys Gly Gln Leu Pro Arg Ala Leu Asp Val Met Ala
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Cys Val Asp Cys Gly Ser Ser Val Gln Asp Pro Gly His Ser Asp Asp
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Pro Leu Phe Ser Glu Leu Asp Gly Leu Gly Leu Glu Pro Met Glu Glu
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Gly Gly Gly Glu Gly Gly Gly Cys Gly Val Gly Gly Gly Gly Asp
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Gln Asp Ser Ala Met Glu Glu Glu Gln Gly Gly Gly Ser Ser Ser
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<211> 1897

<212> DNA

<213> Mus musculus

<400> 7

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 <212> PRT
 <213> Mus musculus

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 35 40 45
 Ile Gln Asn Lys His Leu Cys His Arg Met Ser Ser Ala Leu Glu Ser
 50 55 60
 Val Thr Val Asn Asn Arg Pro Leu Glu Met Ser Val Thr Lys Ser Glu
 65 70 75 80
 Ala Ala Pro Glu Glu Asp Glu Arg Lys Arg Arg Arg Arg Glu Arg Asn
 85 90 95
 Lys Ile Ala Ala Ala Lys Cys Arg Asn Lys Lys Lys Glu Lys Thr Glu
 100 105 110
 Cys Leu Gln Lys Glu Ser Glu Lys Leu Glu Ser Val Asn Ala Glu Leu
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 Lys Ala Gln Ile Glu Glu Leu Lys Asn Glu Lys Gln His Leu Ile Tyr
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 <213> Mus musculus

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<210> 10

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<212> PRT

<213> Mus musculus

<400> 10

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      20              25              30

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Lys Glu Ala Val Thr Val Ala Val Lys Met Leu Lys Asp Asp Ala Thr
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```

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Glu Lys Asp Leu Ser Asp Leu Val Ser Glu Met Glu Met Met Lys Met
      50              55              60

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```

Ile Gly Lys His Lys Asn Ile Ile Asn Leu Leu Gly Ala Cys Thr Gln
      65              70              75              80

```

```

Asp Gly Pro Leu Tyr Val Ile Val Glu Tyr Ala Ser Lys Gly Asn Leu
      85              90              95

```

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Arg Glu Tyr Leu Arg Ala Arg Arg Pro Pro Gly Met Glu Tyr Ser Tyr
      100             105             110

```

```

Asp Ile Asn Arg Val Pro Glu Glu Gln Met Thr Phe Lys Asp Leu Val
      115             120             125

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Ser Cys Thr Tyr Gln Leu Ala Arg Gly Met Glu Tyr Leu Ala Ser Gln
      130             135             140

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Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Val Leu Val Thr Glu
      145             150             155             160

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Asn Asn Val Met Lys Ile Ala Asp Phe Gly Leu Ala Arg Asp Ile Asn
      165             170             175

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Asn Ile Asp Tyr Tyr Lys Lys Thr Thr Asn Gly Arg Leu Pro Val Lys
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Trp Met Ala Pro Glu Ala Leu Phe Asp Arg Val Tyr Thr His Gln Ser
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 Asp Val Trp Ser Phe Gly Val Leu Met Trp Glu Ile Phe Thr Leu Gly
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 Gly Ser Pro Tyr Pro Gly Ile Pro Val Glu Glu Leu Phe Lys Leu Leu
 225 230 235 240
 Lys Glu Gly His Arg Met Asp Lys Pro Thr Asn Cys Thr Asn Glu Leu
 245 250 255
 Tyr Met Met Met Arg Asp Cys Trp His Ala Val Pro Ser Gln Arg Pro
 260 265 270
 Thr Phe Lys Gln Leu Val Glu Asp Leu Asp Arg Ile Leu Thr Leu Thr
 275 280 285
 Thr Asn Glu Glu Tyr Leu Asp Leu Thr Gln Pro Leu Glu Gln Tyr Ser
 290 295 300
 Pro Ser Tyr Pro Asp Thr Ser Ser Ser Cys Ser Ser Gly Asp Asp Ser
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<210> 11

<211> 2429

<212> DNA

<213> Mus musculus

<400> 11

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<210> 12

<211> 431

<212> PRT

<213> Mus musculus

<400> 12

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Met Gly Leu Asn Asp Phe Ile Gln Lys Ile Ala Ser Asn Thr Tyr Ala
      35              40              45

Cys Lys His Ala Glu Val Gln Ser Ile Leu Lys Met Ser His Pro Gln
      50              55              60

Glu Pro Glu Leu Met Asn Ala Asn Pro Ser Pro Pro Ser Pro Ser
      65              70              75              80

Gln Gln Ile Asn Leu Gly Pro Ser Ser Asn Pro His Ala Lys Pro Ser
      85              90              95

Asp Phe His Phe Leu Lys Val Ile Gly Lys Gly Ser Phe Gly Lys Val
      100              105              110

Leu Leu Ala Arg His Lys Ala Glu Glu Val Phe Tyr Ala Val Lys Val
      115              120              125

Leu Gln Lys Lys Ala Ile Leu Lys Lys Lys Glu Glu Lys His Ile Met
      130              135              140

Ser Glu Arg Asn Val Leu Leu Lys Asn Val Lys His Pro Phe Leu Val
      145              150              155              160

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 Ala Leu Gly Tyr Leu His Ser Leu Asn Ile Val Tyr Arg Asp Leu Lys
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 Pro Glu Asn Ile Leu Leu Asp Ser Gln Gly His Ile Val Leu Thr Asp
 225 230 235 240
 Phe Gly Leu Cys Lys Glu Asn Ile Glu His Asn Gly Thr Thr Ser Thr
 245 250 255
 Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu His Lys Gln
 260 265 270
 Pro Tyr Asp Arg Thr Val Asp Trp Trp Cys Leu Gly Ala Val Leu Tyr
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 Thr Lys Arg Leu Gly Ala Lys Asp Asp Phe Met Glu Ile Lys Ser His
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<210> 13

<211> 2447

<212> DNA

<213> Mus musculus

<400> 13

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<210> 14

<211> 326

<212> PRT

<213> Mus musculus

<400> 14

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Lys Glu Ser Phe Glu Lys Val Tyr Gln Val Gly Ala Val Leu Gly Ser
      35              40              45

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Gly Gly Phe Gly Thr Val Tyr Ala Gly Ser Arg Ile Ala Asp Gly Leu
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 Pro Val Ala Val Lys His Val Val Lys Glu Arg Val Thr Glu Trp Gly
 65 70 75 80
 Ser Leu Gly Gly Val Ala Val Pro Leu Glu Val Val Leu Leu Arg Lys
 85 90 95
 Val Gly Ala Ala Gly Gly Ala Arg Gly Val Ile Arg Leu Leu Asp Trp
 100 105 110
 Phe Glu Arg Pro Asp Gly Phe Leu Leu Val Leu Glu Arg Pro Glu Pro
 115 120 125
 Ala Gln Asp Leu Phe Asp Phe Ile Thr Glu Arg Gly Ala Leu Asp Glu
 130 135 140
 Pro Leu Ala Arg Arg Phe Phe Ala Gln Val Leu Ala Ala Val Arg His
 145 150 155 160
 Cys His Asn Cys Gly Val Val His Arg Asp Ile Lys Asp Glu Asn Leu
 165 170 175
 Leu Val Asp Leu Arg Ser Gly Glu Leu Lys Leu Ile Asp Phe Gly Ser
 180 185 190
 Gly Ala Val Leu Lys Asp Thr Val Tyr Thr Asp Phe Asp Gly Thr Arg
 195 200 205
 Val Tyr Ser Pro Pro Glu Trp Ile Arg Tyr His Arg Tyr His Gly Arg
 210 215 220
 Ser Ala Thr Val Trp Ser Leu Gly Val Leu Leu Tyr Asp Met Val Cys
 225 230 235 240
 Gly Asp Ile Pro Phe Glu Gln Asp Glu Glu Ile Leu Arg Gly Arg Leu
 245 250 255
 Phe Phe Arg Arg Arg Val Ser Pro Glu Cys Gln Gln Leu Ile Glu Trp
 260 265 270
 Cys Leu Ser Leu Arg Pro Ser Glu Arg Pro Ser Leu Asp Gln Ile Ala
 275 280 285
 Ala His Pro Trp Met Leu Gly Thr Glu Gly Ser Val Pro Glu Asn Cys
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 Asp Leu Arg Leu Cys Ala Leu Asp Thr Asp Asp Gly Ala Ser Thr Thr
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 Ser Ser Ser Glu Ser Leu
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 <211> 2299
 <212> DNA
 <213> Mus musculus

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 <212> PRT
 <213> Mus musculus

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 Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
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 Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
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 180 185 190
 Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
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 Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
 210 215 220
 Gln Gln Leu Val Gln His Tyr Ser Glu Lys Ala Asp Gly Leu Cys Phe
 225 230 235 240
 Asn Leu Thr Val Val Ser Ser Ser Cys Thr Pro Gln Thr Ser Gly Leu
 245 250 255
 Ala Lys Asp Ala Trp Glu Val Ala Arg Asp Ser Leu Phe Leu Glu Lys
 260 265 270
 Lys Leu Gly Gln Gly Cys Phe Ala Glu Val Trp Leu Gly Thr Trp Asn
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 Gly Asn Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly Thr Met Ser
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 Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys Leu Lys His
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 Asp Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu Pro Ile Tyr
 325 330 335

Ile Val Thr Glu Tyr Met Ser Lys Gly Ser Leu Leu Asp Phe Leu Lys
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 385 390 395 400
 Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu Asp Asn Glu
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 Tyr Thr Ala Arg Gln Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala Pro
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 485 490 495
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<210> 17

<211> 2804

<212> DNA

<213> Mus musculus

<400> 17

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<210> 18
<211> 682
<212> PRT
<213> Mus musculus

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Lys Arg Pro Gln Gln Pro Ser Glu Asp Gly Gln Pro Gln Ala Gln Val
      35             40             45

Thr Pro Ala Ala Pro His His His His His His Ser His Ser Gly Pro
      50             55             60

Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys Arg Tyr Cys
      65             70             75             80

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Arg	Gly	Lys	Val	Leu	Gly	Lys	Gly	Gly	Phe	Ala	Lys	Cys	Tyr	Glu	Met		
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Thr	Asp	Leu	Thr	Asn	Asn	Lys	Val	Tyr	Ala	Ala	Lys	Ile	Ile	Pro	His		
			100					105						110			
Ser	Arg	Val	Ala	Lys	Pro	His	Gln	Arg	Glu	Lys	Ile	Asp	Lys	Glu	Ile		
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Glu	Leu	His	Arg	Leu	Leu	His	His	Lys	His	Val	Val	Gln	Phe	Tyr	His		
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Tyr	Phe	Glu	Asp	Lys	Glu	Asn	Ile	Tyr	Ile	Leu	Leu	Glu	Tyr	Cys	Ser		
145					150					155					160		
Arg	Arg	Ser	Met	Ala	His	Ile	Leu	Lys	Ala	Arg	Lys	Val	Leu	Thr	Glu		
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Pro	Glu	Val	Arg	Tyr	Tyr	Leu	Arg	Gln	Ile	Val	Ser	Gly	Leu	Lys	Tyr		
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Leu	His	Glu	Gln	Glu	Ile	Leu	His	Arg	Asp	Leu	Lys	Leu	Gly	Asn	Phe		
		195					200					205					
Ile	Ile	Asn	Glu	Ala	Met	Glu	Leu	Lys	Val	Gly	Asp	Phe	Gly	Leu	Ala		
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			260					265					270				
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Lys	His	Leu	Ile	Ala	Ser	Met	Leu	Ser	Lys	Asn	Pro	Glu	Asp	Arg	Pro		
305					310					315					320		
Ser	Leu	Asp	Asp	Ile	Ile	Arg	His	Asp	Phe	Phe	Leu	Gln	Gly	Phe	Thr		
				325					330					335			
Pro	Asp	Arg	Leu	Ser	Ser	Ser	Cys	Cys	His	Thr	Val	Pro	Asp	Phe	His		
			340					345						350			
Leu	Ser	Ser	Pro	Ala	Lys	Asn	Phe	Phe	Lys	Lys	Ala	Ala	Ala	Ala	Leu		
		355					360					365					
Phe	Gly	Gly	Lys	Lys	Asp	Lys	Ala	Arg	Tyr	Asn	Asp	Thr	His	Asn	Lys		
	370					375					380						

Val	Ser	Lys	Glu	Asp	Glu	Asp	Ile	Tyr	Lys	Leu	Arg	His	Asp	Leu	Lys	385	390	395	400
Lys	Val	Ser	Ile	Thr	Gln	Gln	Pro	Ser	Lys	His	Arg	Ala	Asp	Glu	Glu	405	410	415	
Pro	Gln	Pro	Pro	Pro	Thr	Thr	Val	Ala	Arg	Ser	Gly	Thr	Ser	Ala	Val	420	425	430	
Glu	Asn	Lys	Gln	Gln	Ile	Gly	Asp	Ala	Ile	Arg	Met	Ile	Val	Arg	Gly	435	440	445	
Thr	Leu	Gly	Ser	Cys	Ser	Ser	Ser	Ser	Glu	Cys	Leu	Glu	Asp	Ser	Thr	450	455	460	
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Glu	Asn	Met	Pro	Glu	Ala	Asp	Cys	Ile	Pro	Lys	Glu	Gln	Leu	Ser	Thr	485	490	495	
Ser	Phe	Gln	Trp	Val	Thr	Lys	Trp	Val	Asp	Tyr	Ser	Asn	Lys	Tyr	Gly	500	505	510	
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Gln	Phe	Ile	Ser	Gln	Val	Thr	Val	Leu	Lys	Tyr	Phe	Ser	His	Tyr	Met	565	570	575	
Glu	Glu	Asn	Leu	Met	Asp	Gly	Gly	Asp	Leu	Pro	Ser	Val	Thr	Asp	Ile	580	585	590	
Arg	Arg	Pro	Arg	Leu	Tyr	Leu	Leu	Gln	Trp	Leu	Lys	Ser	Asp	Lys	Ala	595	600	605	
Leu	Met	Met	Leu	Phe	Asn	Asp	Gly	Thr	Phe	Gln	Val	Asn	Phe	Tyr	His	610	615	620	
Asp	His	Thr	Lys	Ile	Ile	Ile	Cys	Asn	Gln	Ser	Glu	Glu	Tyr	Leu	Leu	625	630	635	640
Thr	Tyr	Ile	Asn	Glu	Asp	Arg	Ile	Ser	Thr	Thr	Phe	Arg	Leu	Thr	Thr	645	650	655	
Leu	Leu	Met	Ser	Gly	Cys	Ser	Leu	Glu	Leu	Lys	Asn	Arg	Met	Glu	Tyr	660	665	670	
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 <212> DNA
 <213> Mus musculus

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<210> 20
 <211> 115
 <212> PRT
 <213> Mus musculus

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 35 40 45
 Arg Thr Asp Gly Glu Pro Arg Ala Arg Leu Gly Ala Leu Leu Ala Arg
 50 55 60
 Tyr Ile Gln Gln Val Arg Lys Ala Pro Ser Gly Arg Met Ser Val Leu
 65 70 75 80
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 Tyr Pro Ser
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 <213> Mus musculus

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<210> 22

<211> 184

<212> PRT

<213> Mus musculus

<400> 22

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Leu Gly Ala Asp Thr Ala Gly Pro Asp Thr Pro Ser Gln Phe Arg Lys
      20                      25                      30

Lys Trp Asn Lys Trp Ala Leu Ser Arg Gly Lys Arg Glu Leu Gln Ala
      35                      40                      45

Ser Ser Ser Tyr Pro Thr Gly Leu Ala Asp Glu Thr Thr Val Pro Thr
      50                      55                      60

Gln Thr Leu Asp Pro Phe Leu Asp Glu Gln Asn Thr Thr Gly Pro Leu
      65                      70                      75                      80

Gln Ala Ser Asn Gln Ser Glu Ala His Ile Arg Val Lys Arg Tyr Arg
      85                      90                      95

Gln Ser Met Asn Gln Gly Ser Arg Ser Asn Gly Cys Arg Phe Gly Thr
      100                      105                      110

Cys Thr Phe Gln Lys Leu Ala His Gln Ile Tyr Gln Leu Thr Asp Lys
      115                      120                      125

Asp Lys Asp Gly Met Ala Pro Arg Asn Lys Ile Ser Pro Gln Gly Tyr
      130                      135                      140

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Gly Arg Arg Arg Arg Arg Ser Leu Leu Glu Val Leu Arg Ser Arg Thr
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Val Glu Ser Ser Gln Glu Gln Thr His Thr Ala Pro Gly Pro Trp Ala
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His Ile Ser Arg Leu Phe Arg Ile
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<210> 23
<211> 850
<212> DNA
<213> Mus musculus

<400> 23
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aaaaaaaaaa 850

<210> 24
<211> 136
<212> PRT
<213> Mus musculus

<400> 24
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Glu Ser Ser Pro Gly Met Ala Thr Leu Ser Glu Glu Glu Val Arg Leu
35 40 45
Leu Ala Ala Leu Val Gln Asp Tyr Met Gln Met Lys Ala Arg Glu Leu
50 55 60
Glu Gln Glu Glu Glu Gln Glu Ala Glu Gly Ser Ser Leu Asp Ser Pro
65 70 75 80
Arg Ser Lys Arg Cys Gly Asn Leu Ser Thr Cys Met Leu Gly Thr Tyr
85 90 95

Thr Gln Asp Leu Asn Lys Phe His Thr Phe Pro Gln Thr Ser Ile Gly
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Val Glu Ala Pro Gly Lys Lys Arg Asp Val Ala Lys Asp Leu Glu Thr
 115 120 125

Asn His Gln Ser His Phe Gly Asn
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<210> 25

<211> 2912

<212> DNA

<213> Mus musculus

<400> 25

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<210> 26

<211> 721

<212> PRT

<213> Mus musculus

<400> 26

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Met Thr Ala Lys Asn Ser Pro Lys Glu Phe Thr Ala Ser Glu Ser Glu
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          20              25              30

Pro Lys Leu Pro Gly Asn Arg Pro Thr Ser Pro Lys Ile Ser Pro Arg
  35              40              45

Ser Ser Pro Arg Asn Ser Pro Cys Phe Phe Arg Lys Leu Leu Val Asn
  50              55              60

Lys Ser Ile Arg Gln Arg Arg Arg Phe Thr Val Ala His Thr Cys Phe
  65              70              75              80

Asp Val Glu Asn Gly Pro Ser Pro Gly Arg Ser Pro Leu Asp Pro Gln
          85              90              95

Ala Gly Ser Ser Ser Gly Leu Val Leu His Ala Ala Phe Pro Gly His
          100              105              110

Ser Gln Arg Arg Glu Ser Phe Leu Tyr Asp Leu Asp Ser Asp Tyr Asp
          115              120              125

Leu Ser Pro Lys Ala Met Ser Arg Asn Ser Ser Leu Pro Ser Glu Gln
          130              135              140

His Gly Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser
          145              150              155              160

Leu Arg Ser Val Arg Asn Asn Phe Thr Leu Leu Thr Asn Leu His Gly
          165              170              175

Ala Pro Asn Lys Arg Ser Pro Ala Ala Ser Gln Ala Pro Val Ser Arg
          180              185              190

Val Ser Leu Gln Glu Glu Ser Tyr Gln Lys Leu Ala Met Glu Thr Leu
          195              200              205

Glu Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Ile Gln Thr Tyr
          210              215              220

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Arg	Ser	Val	Ser	Glu	Met	Ala	Ser	Asn	Lys	Phe	Lys	Arg	Met	Leu	Asn	225	230	235	240
Arg	Glu	Leu	Thr	His	Leu	Ser	Glu	Met	Ser	Arg	Ser	Gly	Asn	Gln	Val	245	250	255	
Ser	Glu	Tyr	Ile	Ser	Asn	Thr	Phe	Leu	Asp	Lys	Gln	Asn	Asp	Val	Glu	260	265	270	
Ile	Pro	Ser	Pro	Thr	Gln	Lys	Asp	Arg	Glu	Lys	Lys	Lys	Lys	Gln	Gln	275	280	285	
Leu	Met	Thr	Gln	Ile	Ser	Gly	Val	Lys	Lys	Leu	Met	His	Ser	Ser	Ser	290	295	300	
Leu	Asn	Asn	Thr	Ser	Ile	Ser	Arg	Phe	Gly	Ile	Asn	Thr	Glu	Asn	Glu	305	310	315	320
Asp	His	Leu	Ala	Lys	Glu	Leu	Glu	Asp	Leu	Asn	Lys	Trp	Gly	Leu	Asn	325	330	335	
Ile	Phe	Asn	Val	Ala	Gly	Tyr	Ser	His	Asn	Arg	Pro	Leu	Thr	Cys	Ile	340	345	350	
Met	Tyr	Ala	Ile	Phe	Gln	Glu	Arg	Asp	Leu	Leu	Lys	Thr	Phe	Lys	Ile	355	360	365	
Ser	Ser	Asp	Thr	Phe	Val	Thr	Tyr	Met	Met	Thr	Leu	Glu	Asp	His	Tyr	370	375	380	
His	Ser	Asp	Val	Ala	Tyr	His	Asn	Ser	Leu	His	Ala	Ala	Asp	Val	Ala	385	390	395	400
Gln	Ser	Thr	His	Val	Leu	Leu	Ser	Thr	Pro	Ala	Leu	Asp	Ala	Val	Phe	405	410	415	
Thr	Asp	Leu	Glu	Ile	Leu	Ala	Ala	Ile	Phe	Ala	Ala	Ala	Ile	His	Asp	420	425	430	
Val	Asp	His	Pro	Gly	Val	Ser	Asn	Gln	Phe	Leu	Ile	Asn	Thr	Asn	Ser	435	440	445	
Glu	Leu	Ala	Leu	Met	Tyr	Asn	Asp	Glu	Ser	Val	Leu	Glu	Asn	His	His	450	455	460	
Leu	Ala	Val	Gly	Phe	Lys	Leu	Leu	Gln	Glu	Glu	His	Cys	Asp	Ile	Phe	465	470	475	480
Gln	Asn	Leu	Thr	Lys	Lys	Gln	Arg	Gln	Thr	Leu	Arg	Lys	Met	Val	Ile	485	490	495	
Asp	Met	Val	Leu	Ala	Thr	Asp	Met	Ser	Lys	His	Met	Ser	Leu	Leu	Ala	500	505	510	
Asp	Leu	Lys	Thr	Met	Val	Glu	Thr	Lys	Lys	Val	Thr	Ser	Ser	Gly	Val	515	520	525	

Leu Leu Leu Asp Asn Tyr Thr Asp Arg Ile Gln Val Leu Arg Asn Met
 530 535 540
 Val His Cys Ala Asp Leu Ser Asn Pro Thr Lys Ser Leu Glu Leu Tyr
 545 550 555 560
 Arg Gln Trp Thr Asp Arg Ile Met Glu Glu Phe Phe Gln Gln Gly Asp
 565 570 575
 Lys Glu Arg Glu Arg Gly Met Glu Ile Ser Pro Met Cys Asp Lys His
 580 585 590
 Thr Ala Ser Val Glu Lys Ser Gln Val Gly Phe Ile Asp Tyr Ile Val
 595 600 605
 His Pro Leu Trp Glu Thr Trp Ala Asp Leu Val Gln Pro Asp Ala Gln
 610 615 620
 Asp Ile Leu Asp Thr Leu Glu Asp Asn Arg Asn Trp Tyr Gln Ser Met
 625 630 635 640
 Ile Pro Gln Ser Pro Ser Pro Pro Leu Asp Glu Arg Ser Arg Asp Cys
 645 650 655
 Gln Gly Leu Met Glu Lys Phe Gln Phe Glu Leu Thr Leu Glu Glu Glu
 660 665 670
 Asp Ser Glu Gly Pro Glu Lys Glu Gly Glu Gly His Ser Tyr Phe Ser
 675 680 685
 Ser Thr Lys Thr Leu Cys Val Ile Asp Pro Glu Asn Arg Asp Ser Leu
 690 695 700
 Glu Glu Thr Asp Ile Asp Ile Ala Thr Glu Asp Lys Ser Pro Ile Asp
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Thr

<210> 27

<211> 1240

<212> DNA

<213> Mus musculus

<400> 27

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<210> 28
<211> 211
<212> PRT
<213> Mus musculus
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<400> 28
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          20                     25             30
Met Lys Arg Thr Leu Leu Asn His Trp Lys Thr Arg Leu Ser Tyr Phe
        35                   40                 45
Leu Gln Asn Ser Ser Ala Pro Gly Lys Pro Lys Thr Gly Lys Lys Ser
    50                      55                60
Lys Gln Gln Thr Phe Ile Lys Pro Ser Pro Glu Glu Ala His Val Trp
   65                  70              75            80
Ala Glu Ala Phe Asp Glu Leu Leu Ala Ser Lys Tyr Gly Leu Ala Ala
      85                    90              95
Phe Arg Ala Phe Leu Lys Ser Glu Phe Cys Glu Glu Asn Ile Glu Phe
       100                105         110
Trp Leu Ala Cys Glu Asp Phe Lys Lys Thr Lys Ser Pro Gln Lys Leu
     115                120       .   125
Ser Ser Lys Ala Arg Lys Ile Tyr Thr Asp Phe Ile Glu Lys Glu Ala
   130                135         140
Pro Lys Glu Ile Asn Ile Asp Phe Gln Thr Lys Ser Leu Ile Ala Gln
  145                150             155         160
Asn Ile Gln Glu Ala Thr Ser Gly Cys Phe Thr Thr Ala Gln Lys Arg
          165                170              175
Val Tyr Ser Leu Met Glu Asn Asn Ser Tyr Pro Arg Phe Leu Glu Ser
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Glu Phe Tyr Gln Asp Leu Cys Lys Lys Pro Gln Ile Thr Thr Glu Pro
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His Ala Thr
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<210> 29
 <211> 2345
 <212> DNA
 <213> Mus musculus

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 <211> 229
 <212> PRT
 <213> Mus musculus

<400> 30
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 35 40 45
 Ala Asp Ser Glu Val Ile Asp Ser His Lys Arg Arg Glu Ile Leu Ser
 50 55 60
 Arg Arg Pro Ser Tyr Arg Lys Ile Leu Asn Glu Leu Ser Ser Asp Val
 65 70 75 80
 Pro Gly Ile Pro Lys Ile Glu Glu Glu Lys Ser Glu Glu Glu Gly Thr
 85 90 95
 Pro Pro Asn Ile Ala Thr Met Ala Val Pro Thr Ser Ile Tyr Gln Thr
 100 105 110
 Ser Thr Gly Gln Tyr Asn Glu Glu Thr Asp Leu Ala Pro Ser His Met
 115 120 125
 Ala Ala Ala Thr Gly Asp Met Pro Thr Tyr Gln Ile Arg Ala Pro Thr
 130 135 140
 Thr Ala Leu Pro Gln Gly Val Val Met Ala Ala Ser Pro Gly Ser Leu
 145 150 155 160
 His Ser Pro Gln Gln Leu Ala Glu Glu Ala Thr Arg Lys Arg Glu Leu
 165 170 175
 Arg Leu Met Lys Asn Arg Glu Ala Ala Arg Glu Cys Arg Arg Lys Lys
 180 185 190
 Lys Glu Tyr Val Lys Cys Leu Glu Asn Arg Val Ala Val Leu Glu Asn
 195 200 205
 Gln Asn Lys Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr
 210 215 220
 Cys His Lys Ala Glu
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<210> 31

<211> 9848

<212> DNA

<213> Mus musculus

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Gly	Thr	Phe	Leu	Val	Arg	Asp	Ala	Ser	Lys	Met	His	Gly	Asp	Tyr	Thr	355	360	365
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Arg	Asp	Gly	Lys	Tyr	Gly	Phe	Ser	Asp	Pro	Leu	Thr	Phe	Asn	Ser	Val	385	390	395
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<212> PRT

<213> Mus musculus

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<210> 40
<211> 295
<212> PRT
<213> Mus musculus
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<400> 40

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Gln Lys Asp Pro His Pro Cys Asn Leu Arg Asn Arg His Ser Thr Ala
35 40 45

Pro Glu Glu His Cys Arg Arg Thr Trp Ser Ser Asp Ser Thr Asp Ser
50 55 60

Val Ile Ser Ser Glu Ser Gly Asn Thr Tyr Tyr Arg Val Val Leu Ile
65 70 75 80

Gly Glu Gln Gly Val Gly Lys Ser Thr Leu Ala Asn Ile Phe Ala Gly
85 90 95

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Val His Asp Ser Met Asp Ser Asp Cys Glu Val Leu Gly Glu Asp Thr
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Tyr Glu Arg Thr Leu Val Val Asp Gly Glu Ser Ala Thr Ile Ile Leu
115 120 125

Leu Asp Met Trp Glu Asn Lys Gly Glu Asn Glu Trp Leu His Asp His
130 135 140

Cys Met Gln Val Gly Asp Ala Tyr Leu Ile Val Tyr Ser Ile Thr Asp
145 150 155 160

Arg Ala Ser Phe Glu Lys Ala Ser Glu Leu Arg Ile Gln Leu Arg Arg
165 170 175

Ala Arg Gln Thr Glu Asp Ile Pro Ile Ile Leu Val Gly Asn Lys Ser
180 185 190

Asp Leu Val Arg Cys Arg Glu Val Ser Val Ser Glu Gly Arg Ala Cys
195 200 205

Ala Val Val Phe Asp Cys Lys Phe Ile Glu Thr Ser Ala Ala Val Gln
210 215 220

His	Asn	Val	Lys	Glu	Leu	Phe	Glu	Gly	Ile	Glu	Arg	Gln	Val	Arg	Leu
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Pro Arg Asp Ser Lys Glu Lys Asn Glu Arg Arg Leu Ala Tyr Gln Lys
245 250 255

Arg Arg Glu Ser Ile Pro Arg Lys Ala Arg Arg Phe Trp Gly Lys Ile
260 265 270

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Val Ala Lys Asn Asn Lys Asn Met Ala Ser Ser Ser Lys Ser Lys Ser
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Cys His Asp Leu Ser Val Leu
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<210> 41
 <211> 1242
 <212> DNA
 <213> Mus musculus

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<210> 42
 <211> 147
 <212> PRT
 <213> Mus musculus

<400> 42
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 20 25 30
 Leu Glu Arg Leu Pro Arg Cys Gly Lys Ala Phe Ala Asp Met Met Gln
 35 40 45
 Lys Val Ala Val Trp Lys Trp Cys Asn Leu Ser Glu Phe Ile Val Tyr
 50 55 60
 Tyr Glu Ser Phe Thr Asn Cys Thr Glu Met Glu Thr Asn Ile Met Gly
 65 70 75 80
 Cys Tyr Trp Pro Asn Pro Leu Ala Gln Ser Phe Ile Thr Gly Ile His
 85 90 95
 Arg Gln Phe Phe Ser Asn Cys Thr Val Asp Arg Thr His Trp Glu Asp
 100 105 110

Pro Pro Asp Glu Val Leu Ile Pro Leu Ile Ala Val Pro Val Val Leu
 115 120 125

Thr Val Ala Met Ala Gly Leu Val Val Trp Arg Ser Lys His Thr Asp
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Arg Leu Leu
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<210> 43
 <211> 1115
 <212> DNA
 <213> Mus musculus

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 gattactgcc tccagaggct gtacatgcgg gacctcggcc acaccagcag cgctcacacg 180
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<210> 44
 <211> 353
 <212> PRT
 <213> Mus musculus

<400> 44
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 35 40 45
 Met Arg Asp Leu Gly His Thr Ser Ser Ala His Thr Ala Leu Met Glu
 50 55 60
 Glu Phe Ala Lys Leu Ile Gln Thr Ile Trp Thr Ser Ser Pro Asn Asp
 65 70 75 80

Val	Val	Ser	Pro	Ser	Glu	Phe	Lys	Thr	Gln	Ile	Gln	Arg	Tyr	Ala	Pro	85	90	95
Arg	Phe	Met	Gly	Tyr	Asn	Gln	Gln	Asp	Ala	Gln	Glu	Phe	Leu	Arg	Phe	100	105	110
Leu	Leu	Asp	Gly	Leu	His	Asn	Glu	Val	Asn	Arg	Val	Ala	Ala	Arg	Pro	115	120	125
Lys	Ala	Ser	Pro	Glu	Thr	Leu	Asp	His	Leu	Pro	Asp	Glu	Glu	Lys	Gly	130	135	140
Arg	Gln	Met	Trp	Arg	Lys	Tyr	Leu	Glu	Arg	Glu	Asp	Ser	Arg	Ile	Gly	145	150	155
Asp	Leu	Phe	Val	Gly	Gln	Leu	Lys	Ser	Ser	Leu	Thr	Cys	Thr	Asp	Cys	165	170	175
Gly	Tyr	Cys	Ser	Thr	Val	Phe	Asp	Pro	Phe	Trp	Asp	Leu	Ser	Leu	Pro	180	185	190
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Cys	Arg	Cys	Arg	Ala	Arg	Lys	Arg	Cys	Ile	Lys	Lys	Phe	Ser	Val	Gln	225	230	235
Arg	Phe	Pro	Lys	Ile	Leu	Val	Leu	His	Leu	Lys	Arg	Phe	Ser	Glu	Ser	245	250	255
Arg	Ile	Arg	Thr	Ser	Lys	Leu	Thr	Thr	Phe	Val	Asn	Phe	Pro	Leu	Arg	260	265	270
Asp	Leu	Asp	Leu	Arg	Glu	Phe	Ala	Ser	Glu	Asn	Thr	Asn	His	Ala	Val	275	280	285
Tyr	Asn	Leu	Tyr	Ala	Val	Ser	Asn	His	Ser	Gly	Thr	Thr	Met	Gly	Gly	290	295	300
His	Tyr	Thr	Ala	Tyr	Cys	Arg	Ser	Pro	Val	Thr	Gly	Glu	Trp	His	Thr	305	310	315
Phe	Asn	Asp	Ser	Ser	Val	Thr	Pro	Met	Ser	Ser	Ser	Gln	Val	Arg	Thr	325	330	335
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<210> 45
 <211> 3034
 <212> DNA
 <213> Mus musculus

<400> 45
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<210> 46

<211> 461

<212> PRT

<213> Mus musculus

<400> 46

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Trp Gly Ser His Ser Glu Phe Glu Asn Asn Phe Leu Asn Ile Asp Pro
      35              40              45

Ile Thr Met Ala Tyr Asn Leu Asn Ser Pro Ala Gln Glu His Leu Thr
      50              55              60

Thr Val Gly Cys Ala Ala Arg Ser Ala Pro Gly Ser Gly His Phe Phe
      65              70              75              80

Ala Glu Cys Gly Pro Ser Pro Arg Ser Ser Leu Pro Pro Leu Val Ile
      85              90              95

Ser Pro Ser Glu Ser Ser Gly Gln Arg Glu Glu Asp Gln Val Met Cys
      100             105             110

Gly Phe Lys Lys Leu Ser Val Asn Gly Val Cys Thr Ser Thr Pro Pro
      115             120             125

Leu Thr Pro Ile Lys Ser Cys Pro Ser Pro Phe Pro Cys Ala Ala Leu
      130             135             140

Cys Asp Arg Gly Ser Arg Pro Leu Pro Pro Leu Pro Ile Ser Glu Asp
      145             150             155             160

Leu Cys Val Asp Glu Ala Asp Ser Glu Val Glu Leu Leu Thr Thr Ser
      165             170             175

Ser Asp Thr Asp Leu Leu Leu Glu Asp Ser Ala Pro Ser Asp Phe Lys
      180             185             190

Tyr Asp Ala Pro Gly Arg Arg Ser Phe Arg Gly Cys Gly Gln Ile Asn
      195             200             205

Tyr Ala Tyr Phe Asp Ser Pro Thr Val Ser Val Ala Asp Leu Ser Cys
      210             215             220

Ala Ser Asp Gln Asn Arg Val Val Pro Asp Pro Asn Pro Pro Pro Pro
      225             230             235             240

Gln Ser His Arg Arg Leu Arg Arg Ser His Ser Gly Pro Ala Gly Ser
      245             250             255

Phe Asn Lys Pro Ala Ile Arg Ile Ser Ser Cys Thr His Arg Ala Ser
      260             265             270

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Pro Ser Ser Asp Glu Asp Lys Pro Glu Val Pro Pro Arg Val Pro Ile
 275 280 285
 Pro Pro Arg Pro Ala Lys Pro Asp Tyr Arg Arg Trp Ser Ala Glu Val
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 Thr Ser Asn Thr Tyr Ser Asp Glu Asp Arg Pro Pro Lys Val Pro Pro
 305 310 315 320
 Arg Glu Pro Leu Ser Arg Ser Asn Ser Arg Thr Pro Ser Pro Lys Ser
 325 330 335
 Leu Pro Ser Tyr Leu Asn Gly Val Met Pro Pro Thr Gln Ser Phe Ala
 340 345 350
 Pro Asp Pro Lys Tyr Val Ser Ser Lys Ala Leu Gln Arg Gln Ser Ser
 355 360 365
 Glu Gly Ser Ala Asn Lys Val Pro Cys Ile Leu Pro Ile Ile Glu Asn
 370 375 380
 Gly Lys Lys Val Ser Ser Thr His Tyr Tyr Leu Leu Pro Glu Arg Pro
 385 390 395 400
 Pro Tyr Leu Asp Lys Tyr Glu Lys Tyr Phe Lys Glu Ala Glu Glu Thr
 405 410 415
 Asn Pro Ser Thr Gln Ile Gln Pro Leu Pro Ala Ala Cys Gly Met Ala
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 His Gly Lys Arg Lys His Leu Ser Tyr Val Val Ser Pro
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<210> 47

<211> 2328

<212> DNA

<213> Mus musculus

<400> 47

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agccccgagg aaaccgctgg aggacctcat tcagccccac ccacagcacc cagccttttt 1380
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cggactccag gagacagagc agggacaagc aagtgcagga aagctggctg catgtatttt 1800
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cagtctgtta ctgcctctgc gaaagctggt tccccggccc ccaggttcca gaacaatgtc 1920
ccgtgcctgg gcaggagtg cggcacactc ggaagcacca tgtttgaagg gtactgtcag 1980
aagtgtttca tcgaagctca gaaccagaga ttccatgaag caagaagaac ggaagaacag 2040
ctgagatcaa gccagcatag agacatgcct cgaactacac aggtagcctc aaggctgaaa 2100
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tgccagcacc taagccaacg agtaggttct gtggcccacc ggggtgagcc cacgcctgaa 2220
gagcccccta aacagcgctg ccggggccct gcttgtgatc actttggcaa tgccaagtgt 2280
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<210> 48

<211> 775

<212> PRT

<213> Mus musculus

<400> 48

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Met Ala Glu Gln Leu Leu Pro Gln Ala Leu Tyr Leu Ser Asn Met Arg
  1                      5                      10                      15

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```

Lys Ala Val Lys Ile Arg Glu Arg Thr Pro Glu Asp Ile Phe Lys Pro
      20                      25                      30

```

```

Thr Asn Gly Ile Ile Tyr His Phe Lys Thr Met His Arg Tyr Thr Leu
      35                      40                      45

```

```

Glu Met Phe Arg Thr Cys Gln Phe Cys Pro Gln Phe Arg Glu Ile Ile
      50                      55                      60

```

```

His Lys Ala Leu Ile Asp Arg Ser Val Gln Ala Ser Leu Glu Ser Gln
      65                      70                      75                      80

```

```

Lys Lys Leu Asn Trp Cys Arg Glu Val Arg Lys Leu Val Ala Leu Lys
      85                      90                      95

```

```

Thr Asn Gly Asp Gly Asn Cys Leu Met His Ala Ala Cys Gln Tyr Met
      100                      105                      110

```

```

Trp Gly Val Gln Asp Thr Asp Leu Val Leu Arg Lys Ala Leu Cys Ser
      115                      120                      125

```

```

Thr Leu Lys Glu Thr Asp Thr Arg Asn Phe Lys Phe Arg Trp Gln Leu
      130                      135                      140

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Glu	Ser	Leu	Lys	Ser	Gln	Glu	Phe	Val	Glu	Thr	Gly	Leu	Cys	Tyr	Asp	
145					150					155					160	
Thr	Arg	Asn	Trp	Asn	Asp	Glu	Trp	Asp	Asn	Leu	Val	Lys	Met	Ala	Ser	
				165					170						175	
Ala	Asp	Thr	Pro	Ala	Ala	Arg	Ser	Gly	Leu	Gln	Tyr	Asn	Ser	Leu	Glu	
			180					185						190		
Glu	Ile	His	Ile	Phe	Val	Leu	Ser	Asn	Ile	Leu	Arg	Arg	Pro	Ile	Ile	
		195					200					205				
Val	Ile	Ser	Asp	Lys	Met	Leu	Arg	Ser	Leu	Glu	Ser	Gly	Ser	Asn	Phe	
	210					215						220				
Ala	Pro	Leu	Lys	Val	Gly	Gly	Ile	Tyr	Leu	Pro	Leu	His	Trp	Pro	Ala	
225					230					235					240	
Gln	Glu	Cys	Tyr	Arg	Tyr	Pro	Ile	Val	Leu	Gly	Tyr	Asp	Ser	Gln	His	
				245					250					255		
Phe	Val	Pro	Leu	Val	Thr	Leu	Lys	Asp	Ser	Gly	Pro	Glu	Leu	Arg	Ala	
			260					265						270		
Val	Pro	Leu	Val	Asn	Arg	Asp	Arg	Gly	Arg	Phe	Glu	Asp	Leu	Lys	Val	
		275					280					285				
His	Phe	Leu	Thr	Asp	Pro	Glu	Asn	Glu	Met	Lys	Glu	Lys	Leu	Leu	Lys	
		290				295					300					
Glu	Tyr	Leu	Ile	Val	Met	Glu	Ile	Pro	Val	Gln	Gly	Trp	Asp	His	Gly	
305					310					315					320	
Thr	Thr	His	Leu	Ile	Asn	Ala	Ala	Lys	Leu	Asp	Glu	Ala	Asn	Leu	Pro	
				325					330					335		
Lys	Glu	Ile	Asn	Leu	Val	Asp	Asp	Tyr	Phe	Glu	Leu	Val	Gln	His	Glu	
			340					345					350			
Tyr	Lys	Lys	Trp	Gln	Glu	Asn	Ser	Asp	Gln	Ala	Arg	Arg	Ala	Ala	His	
		355					360					365				
Ala	Gln	Asn	Pro	Leu	Glu	Pro	Ser	Thr	Pro	Gln	Leu	Ser	Leu	Met	Asp	
		370				375					380					
Ile	Lys	Cys	Glu	Thr	Pro	Asn	Cys	Pro	Phe	Phe	Met	Ser	Val	Asn	Thr	
385					390					395					400	
Gln	Pro	Leu	Cys	His	Glu	Cys	Ser	Glu	Arg	Arg	Gln	Lys	Asn	Gln	Ser	
				405					410					415		
Lys	Leu	Pro	Lys	Leu	Asn	Ser	Lys	Leu	Gly	Pro	Glu	Gly	Leu	Pro	Gly	
			420					425					430			
Val	Gly	Leu	Gly	Ser	Ser	Asn	Trp	Ser	Pro	Glu	Glu	Thr	Ala	Gly	Gly	
		435					440					445				

Pro	His	Ser	Ala	Pro	Pro	Thr	Ala	Pro	Ser	Leu	Phe	Leu	Phe	Ser	Glu	450	455	460
Thr	Thr	Ala	Met	Lys	Cys	Arg	Ser	Pro	Gly	Cys	Pro	Phe	Thr	Leu	Asn	465	470	475 480
Val	Gln	His	Asn	Gly	Phe	Cys	Glu	Arg	Cys	His	Ala	Arg	Gln	Ile	Asn	485	490	495
Ala	Ser	His	Thr	Ala	Asp	Pro	Gly	Lys	Cys	Gln	Ala	Cys	Leu	Gln	Asp	500	505	510
Val	Thr	Arg	Thr	Phe	Asn	Gly	Ile	Cys	Ser	Thr	Cys	Phe	Lys	Arg	Thr	515	520	525
Thr	Ala	Glu	Pro	Ser	Ser	Ser	Leu	Thr	Ser	Ser	Ile	Pro	Ala	Ser	Cys	530	535	540
His	Gln	Arg	Ser	Lys	Ser	Asp	Pro	Ser	Gln	Leu	Ile	Gln	Ser	Leu	Thr	545	550	555 560
Pro	His	Ser	Cys	His	Arg	Thr	Gly	Asn	Val	Ser	Pro	Ser	Gly	Cys	Leu	565	570	575
Ser	Gln	Ala	Ala	Arg	Thr	Pro	Gly	Asp	Arg	Ala	Gly	Thr	Ser	Lys	Cys	580	585	590
Arg	Lys	Ala	Gly	Cys	Met	Tyr	Phe	Gly	Thr	Pro	Glu	Asn	Lys	Gly	Phe	595	600	605
Cys	Thr	Leu	Cys	Phe	Ile	Glu	Tyr	Arg	Glu	Asn	Lys	Gln	Ser	Val	Thr	610	615	620
Ala	Ser	Ala	Lys	Ala	Gly	Ser	Pro	Ala	Pro	Arg	Phe	Gln	Asn	Asn	Val	625	630	635 640
Pro	Cys	Leu	Gly	Arg	Glu	Cys	Gly	Thr	Leu	Gly	Ser	Thr	Met	Phe	Glu	645	650	655
Gly	Tyr	Cys	Gln	Lys	Cys	Phe	Ile	Glu	Ala	Gln	Asn	Gln	Arg	Phe	His	660	665	670
Glu	Ala	Arg	Arg	Thr	Glu	Glu	Gln	Leu	Arg	Ser	Ser	Gln	His	Arg	Asp	675	680	685
Met	Pro	Arg	Thr	Thr	Gln	Val	Ala	Ser	Arg	Leu	Lys	Cys	Ala	Arg	Ala	690	695	700
Ser	Cys	Lys	Asn	Ile	Leu	Ala	Cys	Arg	Ser	Glu	Glu	Leu	Cys	Met	Glu	705	710	715 720
Cys	Gln	His	Leu	Ser	Gln	Arg	Val	Gly	Ser	Val	Ala	His	Arg	Gly	Glu	725	730	735
Pro	Thr	Pro	Glu	Glu	Pro	Pro	Lys	Gln	Arg	Cys	Arg	Ala	Pro	Ala	Cys	740	745	750

Asp His Phe Gly Asn Ala Lys Cys Asn Gly Tyr Cys Asn Glu Cys Tyr
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Gln Phe Lys Gln Met Tyr Gly
 770 775

<210> 49
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 <213> Mus musculus

<220>
 <221> modified_base
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<400> 49
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 ttacaaatat taataaatca atattcacat gacagcaaaa gtggcaatga ttctacaaga 180
 aggtgaggag gaagatgctt tccgggtccgc agcaatgtct ctggagaggc ctctgtgtccc 240
 ttcttttctcc ttcaatgagg tgtgtctcta ttttaagaaa acctgatata agcagatcta 300
 atcagtttag gaagctggta tttatttgca ccgcaaaaata atttttttac aaaaaaaatt 360
 ctatcaagga tccttttaaat atcaagtttc ccaatgcact tagaatacag ttaaccaaat 420
 ttacaagtct tcgactttct tctggtgtag ctctaccgca nggcgtgagg tattgtgtgaa 480
 gtgagtgcgt gcgtccgtg 499

<210> 50
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 50
 catcttggcc tcactgtcca c 21

<210> 51
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 51
 tgcttgctga tccacatctg ctgga 25

<210> 52
 <211> 19
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 52

gggccggact catcgtact

19

<210> 53

<211> 21

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 53

gggaggacct tacctgttcg t

21

<210> 54

<211> 22

<212> DNA

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<400> 54

caccaggctg tgggcctcaa gg

22

<210> 55

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 55

ccagatgtgg atgcttgcaa

20

<210> 56

<211> 19

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 56
 gggagaacag aagcgctg 19

<210> 57
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<400> 57
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<210> 58
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<400> 58
 cccttgtttc aatcactccc a 21

<210> 59
 <211> 21
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<220>
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 oligonucleotide

<400> 59
 tttctgaaca gtgaggtccg c 21

<210> 60
 <211> 19
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<220>
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<400> 60
 ccggaagagg tggcggcga 19

<210> 61
 <211> 20
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<400> 61
 gggctctgat ggagtgccttg 20

<210> 62
 <211> 21
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<220>
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<400> 62
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<210> 63
 <211> 26
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 63
 tcttgcagaa ttctctgct cctggg 26

<210> 64
 <211> 20
 <212> DNA
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<220>
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<400> 64
 tttcttgcca gttttgggct 20

<210> 65
 <211> 23
 <212> DNA
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<220>
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 oligonucleotide

 <400> 65
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 <210> 66
 <211> 20
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 <400> 66
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 <210> 67
 <211> 20
 <212> DNA
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 <220>
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 <400> 67
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 <210> 68
 <211> 27
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 <220>
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 <400> 68
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 <210> 69
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 <400> 69
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<210> 70
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<220>
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<400> 70
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30

<210> 71
 <211> 22
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 71
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22

<210> 72
 <211> 26
 <212> DNA
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<400> 72
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26

<210> 73
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 <212> DNA
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<220>
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<400> 73
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23

<210> 74
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 <212> DNA
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<220>
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<400> 74
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<210> 75
 <211> 22
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 75
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<210> 76
 <211> 24
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 76
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<210> 77
 <211> 19
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 77
 gccgtgtgta tggctgcat 19

<210> 78
 <211> 20
 <212> DNA
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<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 78
cagccccag gccactgtgg 20

<210> 79
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 79
aggagggata acaggtgctg tgt 23

<210> 80
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
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<400> 80
cctggacccc agccataga 19

<210> 81
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 81
agcccatgta gtcccgtca cttta 24

<210> 82
<211> 14
<212> DNA
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 82
tgcgccggcc aaaa 14

<210> 83
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 83
gcttggacag ccccagatc

19

<210> 84
<211> 24
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<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 84
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24

<210> 85
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 85
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20

<210> 86
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 86
gcgagtttga aggcattga

19

<210> 87
<211> 23
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 87

ctctcttcac ccgccgatgc gat

23

<210> 88

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 88

ccatgtttct ccaggtcaaa atg

23

<210> 89

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 89

tggcagactc ggcttctgt

19

<210> 90

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 90

tttgctttgg ccacacccta cctgg

25

<210> 91

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 91

ctggtcggga ggactttgg

19

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 92
tggaccaatg ccccagtt

18

<210> 93
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 93
tcagtcaaag ccgttggtgt tttcattg

28

<210> 94
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 94
gcccgtttta taggtgacat tttaa

25